

REMARKS

Claims 1-19 are pending. Claims 1 and 10 are amended herein. No new matter is added as a result of the claim amendments. Support for the claim amendments can be found at least on page 8, lines 5-10, of the instant specification.

Specification

According to the instant Office Action, the title is not descriptive. The title is amended herein.

102 Rejections

The instant Office Action states that Claims 1-4, 9-11 and 13-14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Nakajima et al. ("Nakajima;" U.S. Patent No. 5,428,217). The Applicants have reviewed the cited reference and respectfully submit that the embodiments of the present invention recited in Claims 1-4, 9-11 and 13-14 are not anticipated nor rendered obvious by Nakajima.

Independent Claim 1 recites "a first region on said disk, wherein said first region increases continuously in size in a radial direction from a minimum at a first angular position to a maximum that is 360 degrees from said first angular position" (emphasis added). Independent Claim 10 recites "a code disk ... comprising a first region and a second region adjacent to said first region, wherein said first region increases continuously in size in proportion to angular disk position over a 360-degree arc" (emphasis added).

Applicants respectfully submit that the terms of the claims should be given the ordinary and customary meaning that would be attributed to them by one of ordinary skill in the art. Applicants respectfully submit that Nakajima does not

show or suggest the limitations of independent Claims 1 and 10 cited above. Figure 21 of Nakajima, for example, shows regions that increase discontinuously in size. The boundaries of the region (slit) 1101 of Nakajima quite clearly exhibit discontinuities.

To further distinguish the claimed invention from Nakajima, independent Claim 1 is amended to recite “said first region defined by a circular first boundary and a second boundary that is continuous from said minimum to said maximum,” and independent Claim 10 is amended to recite “wherein said first region is defined by a circular first boundary and a second boundary that is continuous over said 360-degree arc” (emphases added). Applicants respectfully submit that Nakajima does not show or suggest such limitations.

In summary, Applicants respectfully submit that Nakajima does not show or suggest the embodiments of the present invention recited in independent Claims 1 and 10. Furthermore, because Claims 2-4, 9, 11 and 13-14 depend from either Claim 1 or 10 and recite additional limitations, Applicants respectfully submit that Nakajima does not show or suggest the embodiments of the present invention recited in 2-4, 9, 11 and 13-14. Therefore, Applicants respectfully submit that the basis for rejecting Claims 1-4, 9-11 and 13-14 under 35 U.S.C. § 102(b) is traversed, and that Claims 1-4, 9-11 and 13-14 and 10 are in condition for allowance.

103 Rejections

The instant Office Action states that Claims 5-8, 12 and 15-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakajima. The Applicants have reviewed the cited reference and respectfully submit that the embodiments of

the present invention recited in Claims 5-8, 12 and 15-19 are not anticipated nor rendered obvious by Nakajima.

As presented above, Applicants respectfully submit that Nakajima does not show or suggest the embodiment of the present invention recited in independent Claims 1 and 10. Because Claims 5-8, 12 and 15-19 are dependent on either Claim 1 or 10 and recite additional limitations, Applicants respectfully submit that Nakajima also does not show or suggest the embodiment of the present invention recited in Claims 5-8, 12 and 15-19. Therefore, Applicants respectfully submit that the basis for rejecting Claims 5-8, 12 and 15-19 under 35 U.S.C. § 103(a) is traversed, and that Claims 5-8, 12 and 15-19 are in condition for allowance.

Furthermore, Applicants respectfully agree with the statement in the instant Office Action that Nakajima does not teach a fifth, sixth or seventh region as recited in Claims 5-8 and 15-18. However, Applicants respectfully disagree that these claim limitations would have been obvious to one of ordinary skill in the art. The fifth, sixth and seventh regions provide utility and advantages beyond those provided by the claimed first, second, third and fourth regions. Namely, as described in the instant application, the fifth, sixth and seventh regions provide robustness against degradation of the light source, against the introduction of stray light, and against any singularities that might otherwise be present. Thus, the fifth, sixth and seventh regions are not merely obvious improvements that would have been apparent to one of ordinary skill in the art. Applicants respectfully submit that the Examiner has not presented a convincing line of reasoning as to why the claimed subject matter as a whole would have been obvious. Applicants respectfully submit that the Examiner provide a reference or additional basis supporting such a conclusion.

Conclusions

In light of the above remarks, Applicants respectfully request reconsideration of the rejected claims. Based on the arguments presented above, Applicants respectfully assert that Claims 1-19 overcome the rejections of record and, therefore, Applicants respectfully solicit allowance of these claims.

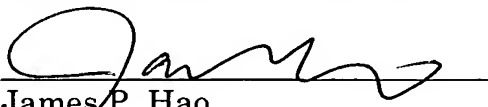
Applicants have reviewed the references cited but not relied upon. Applicants did not find these references to show or suggest the present claimed invention: U.S. Patent Nos. 5,650,613, 5,734,160, 6,222,183, 6,170,162, 6,888,126, 6,822,220 and 6,552,330; and U.S. Patent Application Publication No. 2002/0179826.

The Examiner is invited to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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